TRAINING OF THE BLIND

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#### TRAINING OF THE BLIND\*

By ROBERT W. WOOLSTON, Managing Officer, Illinois School for the Blind

The educators of the blind of the United States have just celebrated, June 27th to July 1st, the one hundredth anniversary of organized education of blind children in this country. One hundred years ago three schools for the blind were built, one in Boston, one in New York City, and one in Philadelphia. Only seventeen years later the Illinois School for the Blind at Jacksonville was built. Since its founding it has been very closely related to the three original schools and with those schools it has endeavored to make its educational contributions to the blind in general.

The education of the blind, as you know, depends upon the sense of touch and the sense of hearing, yet through conflicting opinions regarding Braille, which is the code of embossed dots, this country was deprived of a uniform system of reading and writing and of embossing literature in uniform type for the blind, until only fourteen years ago, when in 1918, the Revised Braille system was adopted

nationally. One of the greatest contributions to this national system of Braille, which will become within the next year, the embossed code of dots used by the blind of the English speaking world, was made in 1892 by Dr. Frank H. Hall of the Illinois school. That contribution was his invention of the Hall-Braille Writer, and the Braille Stereotyper. Out of that invention has grown the American Printing House for the Blind, Louisville, Kentucky, which supplies modern Braille text books for all the schools for the blind in the United States. Every blind school has its prorata in that national printing house, and every pupil has his prorata of Braille text books and supplementary Braille literature which correspond to that of any pupil in the same grade of any other school. In other words, the third grade boy of the Alabama School for the Blind has the same consideration by the Printing House as does the third grade boy in the California School for the Blind.

When we speak of Braille, we refer to the very foundation of the education and enlightenment of the blind.

The Department of Public Welfare, during the present administration, has urged the teaching staff to make a careful study of the special technique through research work. To this end, the Department brought to the school a Teachers' Institute conducted by Dr. Kathryn E. Maxfield, psychologist of the American Foundation for the

\*Read before the Association of Illinois State Welfare Institutions at the Illinois Soldiers' and Sallors' Children's School at Normal, September 28, 1932, and published in abbreviated form.

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### FEVER TREATMENT OF GENERAL PARALYSIS

Dr. Sidney D. Wilgus, State Alienist and Director of the State Psychopathic Institute at Elgin, and Dr. Ralph H. Kuhns, chairman of the research section of the Institute, collaborated in "A Study Of Various Agents For The Production of Fever in the Treatment of General Paralysis," which was read at the annual meeting of the American Congress of Physical Therapy in New York City, September 8, 1932.

In the study, seven fever producing agents were discussed, namely, typhoid vaccine, rat bite, malaria, sulphurin-oil, diathermy, electrically heated blanket, and radiothermy.

After reviewing the typhoid vaccine and rat bite treatments, and the results obtained in the mental hospitals in Illinois and elsewhere, the study says of the former, that "it has largely fallen out of use in favor of other forms of treatment producing more favorable results," and of the latter, it declares that "this method of treatment was finally discarded because of sloughs and other disagreeable complications, as well as poor specific results. It is not now in extensive use anywhere."

The study then turns to the four methods of treatment of paresis now employed in the mental hospitals in Illinois, namely, malaria, sulphur-in-oil, diathermy and electric blanket, and points out that each method has its strong supporters; that all are agreed that heat is necessary, but there is a difference in opinion as to the proper heat producing agency; that the advocates of the malaria and sulphur treatments claim the best results are obtained by inoculating the patient with a fever (heat) producing agent, which will cause a disease, while the promoters of the diathermy and electric blanket assert that heat is the only thing necessary, and that the simplest and safest way to induce it is by mechanical means.

On the subject of inoculating a patient with tertian (every second day fever) malarial parasites, the study says that it is the outgrowth of observation on the effect of fever and intercurrent infection upon the course of syphilis, and that for ten years it has held the center of the thera-

peutic stage of general paralysis.

"The belief," says the authors of the study, "that the effect of the malarial infection is largely due to the induced fever, is supported by the general opinion of many observers that good results will be proportionate to the height reached by the fever paroxysms in the individual case." They quote an enthusiastic member of the medical staff of one of the Illinois mental hospitals, as follows:

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#### THE DEPARTMENT OF PUBLIC WELFARE

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\* Chief of Staff.

Since epilepsy, as a rule, is a memory destroying process, the greater variety of occupations we can plan for them and teach them, the greater is the possibility of strengthening the association area and thus improve their memory and retard deterioration. From the psychological point of view, the therapeutic value of handwork depends upon the interest, concentration, and initiative required to execute it, and before we can develop initiative, we must have interest aroused and held. The more interesting and constructive the problem, the more therapeutic its value. Unless the occupation is administered with a working knowledge of the disease and adapted to meet the needs of the individual patient, it is only work. - Warren G. Murray, M. D., Managing Officer, Dixon State Hospital, Dixon, Illinois.

#### PER CAPITA COSTS

The daily average number of patients, inmates, and pupils present in the twenty-six state institutions during the year ending June 30, 1932, was 43,693.2. The annual per capita cost was \$307.66.

Included in these figures are the Manteno State hospital and the Reformatory for Women at Dwight, two new institutions with high per capita costs, on account of the unusual expenses incident to opening a new hospital and a new reformatory.

Excluding these two institutions from the calculations, the per capita cost was \$303.70.

Comparing the average cost of the twenty-four institu-tions that were in full operation during the two years (1931 and 1932) ending June 30, there was a decrease of \$5.44 in the latter year, and a decrease of \$12.41, when compared with the year ending June 30, 1930.

In arriving at the per capita cost every item of expenditure is taken into consideration with the exception of permanent improvements.

The lowest per capita cost was in the feebleminded group, with institutions at Dixon and Lincoln. At the former, the cost was \$222.36, the lowest in the state, and at the latter, \$253.74.

The lowest per capita cost in the hospital group, \$250.10, was at Peoria, and the highest, \$439.98, was at Manteno, a new hospital.

Other per capita costs in the hospital group were: Elgin, \$263.10; Kankakee, \$297.15; Jacksonville, \$261.56; Anna, \$275.58; East Moline, \$281.97; Chester, \$255.65; Chicago, \$268.09; and Alton, \$311.86.

In the school group the costs were: School for the Deaf at Jacksonville, \$722.51; School for the Blind, also at Jacksonville, \$893.43; and the Soldiers' and Sailors' Children's School at Normal, \$510.11.

The high cost in the school group is largely on account of the high professional qualifications the Department requires of teachers.

In the penal group the lowest cost, \$245.83, was at the Southern Illinois penitentiary at Menard, and the highest, \$824.17, was at the Reformatory for Women at Dwight, a new institution.

Other costs in the penal group were: Joliet penitentiary. \$285.20; Women's prison, \$425.61; Pontiac reformatory, \$283.51; and Vandalia State farm, \$255.73.

In the Homes group the per capita costs were: Soldiers' and Sailors' Home at Quincy, \$499.28; Soldiers' Widow's Home at Wilmington, \$606.79; and the Industrial Home for the Blind at Chicago, \$562.84.

In the schools for delinquent boys and girls, namely, the St. Charles School for Boys and the Training School for Girls at Geneva, the costs were \$552.44 and \$460.63, re-

At the Illinois Eye and Ear Infirmary at Chicago, the average cost per treatment was \$1.14, a decrease of 43 cents per patient from the previous year, and a decrease of \$1.57 per patient from the year ending June 30, 1930

At the Research and Educational hospitals in Chicago there was an increase of 4 cents per patient treatment, the average cost being \$3.41.

The automobile, which has brought so much danger to the pedestrian, is especially dangerous to the blind. The ingenious idea that the blind should carry white walking sticks, as a sign of their infirmity, is being put into practice in London. Institutions for the blind are now supplying these sticks, which will become a recognized warning to automobile drivers.

#### HE FOUND HIMSELF

Recently, a somewhat hypomanic (mania of a moderate type) patient, well educated, and who was admitted to the Elgin State hospital April 7, 1930, was asked by Dr. Charles F. Read, the managing officer of the institution, to write an explanation of how he manages to conduct his personal affairs as a patient.

His response, in part, as follows, was taken as a mental health message for a recent radio talk by Dr. Read.

This question was put to the patient:

"How may one be contented and happy, though confined

in a hospital for diseased mentalities?

In formulating his reply, the patient handled the subject under four general headings with numerous subheads and indentations, showing careful scholastic training and intelligence of a high order. The four general headings were:

1. Reorient one's self.

2. Become again as a little child, retaining of adult sophistication only so much craft as may be necessary to guard the self in the main from being imposed upon.

-3. Definitely, purposely, continuously, seek to develop an interest in others about equal to one's interest

in one's self.

4. Without denying in any degree the sad inconvenience of being shut up in an institution for the treatment of diseased minds.

In elaborating these inconveniences, the patient says in his formal reply to the managing officer that they can be turned into great and permanent advantages, and that confinement in a mental hospital is really a much lighter hardship than it appears to be at first glance.

"Make a few, a very few, good resolutions," says this hypomaniac, "and then be faithful to the same as far as is humanly possible. Carry them out, no matter how silly the carrying out of them may seem to others, or how sore and weary it may make your muscles, or your spirit."

"Many years ago," writes this patient, "I stood by a set of switch points on the Colonial Railway system in eastern Canada. A veteran railway man, who was my guide, said, 'let a train take the northern side of any one of these switches and keep on going and it will land in Vancouver on the Pacific coast. Let it take the southern side and eventually it will land in a city that soon will be connected with Central and South American systems, so that such a train can be run to the southern tip of Patagonia,' So one of those points, not a quarter of an inch wide, but between whose terminals lay a distance of nearly fifteen thousand miles, might be called a point of divergence. Physical things are often shadows of the

mental and spiritual operations." "The point of divergence in my case," continues this man, "was a game of cards. From interest in a game of solitaire in the frequent playing of which a fellow patient exhibited that power of looking far ahead and planning combinations to suit, which makes for success in mathematics or in the game of chess, I passed to interest in the player himself. The rest followed naturally and easily. Faith was born again, a weak and faltering faith, but real and destined for rapid growth, with resultant victory over doubts and fears of all kinds. It grew almost in a night and a day to a degree far beyond that of any former experience, and so far-about seven months, has not been set back by a single moment of uncertainty. And that faith is simple, concrete, practical. It is no worker of miracles, but in a quiet effective way it works. Along with this renewal of faith came energized resolution to employ to the uttermost such means of physical and mental improvement as I was acquainted with and were within reach.

"In one week I was a new man. (Here patient probably became hypomanic, but this does not necessarily invalidate his experiences.) From a constantly entertained wish that I had the nerve to kill myself, I passed to an eager childlike desire to live. From an experience of partial death of all the higher faculties, I passed to painless, joyous, confident expectation of living through many fruitful, happy years. From indifference toward my fellowmen, and my distant burdened and saddened relatives, I passed to a lively interest in them. I began to fight for order in thought and deed, etc."

At the present time this patient is working in the dining room of one of the institution cottages. He is a good worker, very co-operative, very much interested in his occupation, and says he started recovering from his mental condition about seven months ago. He is happy that he is living. His conduct is good and he denies delusions, hallucinations and paranoid ideas. Having been a Latin teacher in college, he says he would like to teach Latin

to some of the young boys in his cottage.

## DENTAL SERVICE IN STATE INSTITUTIONS

The value of the service rendered by the dental division of the Department of Public Welfare during the year ending June 30, 1932, was \$332,820—\$245,808 in the charities division, and \$87,212 in the penal group.

The total cost of this service was \$57,588.26.

The cost of thousands of minor examinations is not included in the value of the service rendered. Had this been done it would have added several thousand dollars.

In compiling the value of the service rendered, Dr. C. L. Daniels, state dental supervisor, used the prevailing cost in high-grade dental offices, whether it was filling, dentures, crowns, bridges, extractions, prophylaxis, or what not. Treatments were grouped under one head at a dollar each. Many of them would have cost from two to ten dollars each in private practice.

In arriving at the cost to the state for the service, salaries of dentists, assistants, dental supplies, laboratory work, etc., were used, and where new equipment had been purchased during the year, 5 per cent was allowed for deterioration.

"We have been very successful," says Dr. Daniels in his annual report, "in combating two serious epidemics of Vincent's infection, this being done without the loss of a single patient. This disease is difficult to combat and control as it is brought into the institution by new patients. We now have a workable plan to keep new arrivals in isolation until danger of being a carrier of this disease is past. As diet and dirt have much to do with this disease, we are making every effort to develop our oral hygiene program with a diet containing the essentials for a clean, healthy mouth."

## ARMISTICE DAY AT ANNA STATE HOSPITAL

Veterans of the Civil, Spanish-American, and World wars, who are now patients at the Anna State hospital, were entertained by the Anna Legion post on Armistice day. The exercises, held in the chapel of the institution, consisted of short, snappy talks by representatives of the local post and the singing of war songs. A short prayer by a patient who was a chaplain in the World war closed the informal program.

Following the program the veterans were served a bounteous dinner, the turkey and trimmings for which were donated by several auxiliary units of the Legion, which also sent cigarettes and home made candies in abundance.

In the evening the Townsend F. Dodd local post of the American Legion escorted twelve World war veterans to a moving picture show in Anna. It was the first time that many of them had seen a "talkie."

#### TRAINING OF THE BLIND

(Continued from Page 1, Column 1)

Blind, New York City, Dr. Freida Keifer Merry, head of the Experimental School for the Blind, Perkins Institution, Boston, and Dr. Berthold Loewenfeld, School for the Blind, Vienna, Austria, three of the best authorities that could be obtained.

Out of their years of research and experimental work these instructors brought to the staff of the Illinois school the most improved methods of teaching blind children.

Mr. Louis W. Rodenberg, himself blind, and a member of our staff, who has spent the greater part of his life on the study of Braille, has on two occasions represented the United States in international conventions—one year ago in Paris, and this year in London. Mr. Rodenberg is considered one of the best authorities on the subject of Braille.

Again, another member of our staff, Mr. D. W. Hamilton, has been given a free hand in an investigation and a survey with reference to the study of general science. He has been appointed a member of the National Committee on General Science, and as a result of the recommendation of that committee, a new Braille text book on this subject is in the hands of hundreds of high school students this year, and the committee's findings on laboratory work are available this fall. No school can advance much by itself. The greatest progress is made through the co-operation of all Braille schools.

It is said that "the radio is the greatest blessing that has come to the blind since the invention of tactile print." With the advent of the radio, the dependent blind person who begged for the reading of the daily news that he might not be isolated from the world, feels independent as he obtains the radio news several times a day, told in a concise, brief, and interesting manner, and helps to make of him a social being. Think of the blind person in a farm home in southern Illinois hearing in one week the United States Navy Band, the United State Army Band, the United States Marine Band, the Great Choir in Salt Lake City, the Rochester Philharmonic Orchestra, the Chicago Civic Opera, and even the Metropolitan Opera Company. The School of the Air offers a great variety of historical, literary, and musical courses. It results in creative listening. We can sit in the schoolroom and hear an address by the President of the United States, the King of England, and even the Pope.

No school for the blind is modern and up-to-date that does not have a schoolroom set apart and equipped with a fine radio. Last year the School of the Air broadcast for English classes, "The Man Without a Country," "The Gold Bug," "Ivanhoe," "Silas Marner," "Julius Caesar," and many others. It is true, there is much chaff in many radio programs, but the teachers in charge know how to get the wheat. We can better realize the value of the radio when we understand that less than 20 per cent of the 120,000 blind people in this country can read and

write.

The American Foundation for the Blind, New York City, has undertaken the great task of placing thousands of radios in the homes of the blind throughout this country. Just recently we had the pleasure of recommending the placement of radios in fourteen homes. They were placed, and as time passes, many blind people in Illinois will be favored by the Foundation. I have referred to the education of the blind by Braille and radio.

The latest invention in the interest of the blind is that of the Visograph. The Visograph was invented by Mr. Robert E. Naumberg, Cambridge, Massachusetts. The Visograph is now in the process of perfection. It is a device which will enable a blind person to read either in his own home, or in any public library, any printed book available to seeing people. This automatic Visograph

enables the blind person to read the printed book without the aid of another person. The printed book is placed in the device, an electric button is touched, and the pages of the book are reproduced word by word in embossed

letters much larger than the print.

The inventor explains that "Benjamin Franklin is said to have placed a black handkerchief and a white handkerchief on the snow. The white handkerchief reflected the light and the heat of the sun, and the snow did not melt rapidly. The black handkerchief, according to a well-known principle of physics, absorbed the heat and light and the snow melted rapidly. This is the principle used in the Visograph. There is a photoelectric cell, sensitive to light, which is the electric equivalent to the human eye. It can distinguish black from white. A fine spot of light is focused on the printed page and travels across it rapidly from left to right as in reading. If the spot of light strikes black ink it is not reflected, and if it strikes white paper it is reflected onto the photoelectric cell. As the spot of light travels across the book, a magnet with a printing point travels under the sheet of material on which the raised letters are formed. Whenever the spot of light 'sees' white, the light is reflected onto the photoelectric cell, which, in turn, sets up an amplified electric current, and then goes to the electric magnet which holds the paper down where it will not make a mark. If the point of light 'sees' black, the magnet causes the printing point to rise in a small fraction of a second, and makes an indentation on the under side of the sheet of material, which is felt by the fingers of the blind person as raised or embossed words."

In this manner the entire book, line by line, page by page, is reproduced in magnified raised letters. Some day the Visograph, like the radio, will supplement Braille, and who can say but that the Visograph, in years to come, will be placed in the homes of the blind, as are the radios today?

About 10 per cent of the blind of Illinois are children of school age, but not all are educable. Those who are educable are either in the School for the Blind at Jacksonville, or live in their homes and attend the special classes for the blind in the public schools of Chicago.

The last intelligence test taken of the School for the Blind found the lowest mental level to be only 54, while several of the highest were 138, with average mental level of 86. After eliminating those of the lowest mental levels, because those having an intelligence quotient below 65 can never learn to read with their fingertips, the school was organized on the same general plan, and using the same course of study as that of the public schools. While of necessity our methods and technique are entirely different, the results obtained are the same. From the first grade to the fourth year of the high school, only one subject, chemistry, is omitted. It is not practical to teach chemistry to the blind.

The literary courses, covering twelve years, are supplemented with courses in music, such as pipe organ, voice, violin, and orchestral instruments.

While the deaf are more widely separated from the processes of gaining knowledge and from the intelligence of the world, it must be remembered that blindness is the greatest physical affliction that can befall mankind. No other physical affliction curtails, isolates, and handicaps as does blindness. With this thought in mind, educators are favoring intensive cultural training for the young blind, to put them in possession of an intellectual life as intensive as it is possible for them to enjoy. However, this in no way should prevent any pupil in a school for the blind from having a thorough, practical education.

Before students are graduated from the high school, each is taught several of the fifteen practical trades which they

can ply in their homes without the expenditure of money for equipment. When a student becomes a junior in the high school his aptitudes are studied, and he specializes in some trade that will contribute to his livelihood. Today there are hundreds of blind young men and women who have gone out from our school better prepared to earn a living than any other member of their families.

The Director of the Department of Public Welfare, recognizing this situation in our state, has changed the Division of Visitation of the Adult Blind into an extension course of the School for the Blind. Sixteen teachers conduct the work of this extension course. This staff of teachers, during the past summer, was given a very thorough course of instruction in the methods of teaching Braille, and in the several vocations which they teach the blind people in their respective homes.

We have standardized all useful household articles made by the blind in their homes, will furnish them with raw materials at wholesale prices, and will provide a market for the finished product. Thus we hope that the trained, ambitious and industrious blind may be able to supplement the meagre income of their families. The household articles which have been standardized are those which must be used in every home and which, through continuous wear, must be replaced frequently, such as brushes and dusters, bathroom rugs, woven scarfs, runners, drapes, chair caning, a trade for a boy in every community, fibre porch furniture, toy furniture, a half dozen different kinds of baskets needed in every home, hammocks, doormats, etc.

In Germany blind pupils leave the school upon completion of the 6th and 7th grades and go directly to the industrial workshops where they spend the rest of their lives. The plan is not generally favored because only the few are aided and the state assumes the responsibilities that should be shared by relatives and the various communities.

Over in France hundreds of blind men are employed as organists in the churches and cathedrals. Through the influence of the Church, various communities exercise a very charitable attitude. Possibly the blind organist does not fit in socially as well as a sighted one, but the afflicted are not forgotten nor cast aside. So it is with our state. The telephone switchboard for blind operators is encouraged by the Bell Telephone company to train blind operators. We know that not all the operators whom we have placed are satisfactory, but neither are all sighted operators. We appreciate the patience and indulgence that have been shown in this matter. So far the work has been more or less experimental, but when the Bell Telephone company installs the new attachment on the various boards we can guarantee better service. We have several blind men who have operated village switchboards satisfactorily for several years. We believe that with the aid of this new attachment, some day the number of blind operators employed at the telephone switchboards throughout Illinois will equal the number of pipe organists employed in France. This can be done only through a sympathetic public.

## THIS MOTHER IS APPRECIATIVE

"Some few weeks since, as we were returning to the hospital with .....," writes the mother of a patient to Dr. J. C. Stewart, managing officer of the Alton State hospital, "the patients were coming from the dining hall, and it seemed to me that I had never seen them look so contented, well fed, and cared for as they do at this time. We have been paying regular visits to the hospital for about fifteen years. I wish to compliment you on your good management of the unfortunates in your care."

# ANNUAL REPORT OF SUPERINTENDENT OF CHARITIES

In his annual report for the year ending June 30, 1932, Mr. A. L. Bowen, superintendent of charities, says that it has been the purpose, policy, and determination of the charities division of the Department of Public Welfare

since January, 1929:

"First-To develop a state hospital to give the best and most modern medical service to its patients; to warrant public confidence in its personnel and facilities; to return to society the greatest possible number; to afford to those who must remain, the creature comforts of the average home, clean surroundings, sympathetic attention, harmonious environment, pleasant and creative tasks, freedom from spying eyes, harsh and grating prohibitions, locked doors and barred windows; ample play and recreation, and all other things that might contribute to contentment -possibly happiness, good conduct and self achievement; and most important, to lend its vast material and resources to the great mental hygiene movement to save humanity from the ravages of mental and nervous diseases, and to promote the means through which men may live more harmonious and more productive lives, free from the irritations, torments and inhibitions of inadequate adjustment.

"Second—To develop educational and re-educational institutions for handicapped, defective, and normal children under our charge so as to give them equipment with which to meet on equal terms those born to more fortunate

conditions.

"Third—To make the institutions for old people true homes, with surroundings pleasing to those of advancing years, the warmth and coziness, peace and contentment that are associated with the fireside evenings of live.

"Fourth—To provide all this at a minimum of cost to the overburdened taxpayer, always meeting, however, his demand that these services shall be so maintained that he himself will feel no hesitation in accepting them for himself or his family or his friends in the faith and confidence that there is nothing better.

"In testimony thereof these institutions have been open to public inspection, and to the suggestions and recommendations of both lay and expert observer. We have kept in close touch with developments in other states of our rank, and have freely adopted those changes, reforms,

innovations and new methods which promised to enhance the program we have outlined.

"We do not hesitate to say that Illinois charitable institutions today rank with the best in the United States. They have been brought nearer to our ideals than they ever have been. Our own knowledge of this fact frequently has been reinforced by the endorsements and praise, not only of the people of our state, but of professional men and women from other states.

"Gratification has been unmistakably shown by public, patients and inmates in the good results that have followed

the development of this plan.

"Our institutions have not been content to accept, and not to give. They have forged ahead into new fields and have offered to other states many demonstrated successes in treatment, care, and rehabilitation.

"And we ask consideration of the very important point that this remarkable rise in quality of service, extended to a rapidly growing population, has been accomplished

upon a steadily declining per capita cost."

New York's newest medical center, the New York Hospital-Cornell Medical College, a \$30,000,000 plant twenty-seven stories high, was opened to the public on September 1.

## FEVER TREATMENT OF GENERAL PARALYSIS

(Continued from Page 1, Column 2)

"I will say that malaria has stood the test of time and still remains unrivaled in combination with tryparsamide. It combines both heat and biologic factors. While mechanical heat treatment handles only at least fairly cooperative patients for technical reasons and, therefore, comprises the cream of our material, malaria can be given to very disturbed patients and is more economical. Histopathological and laboratory evidence at present favor malaria, and the burden of proof in these two respects still rests upon those who advocate mechanical production. Their contention that heat is the sole factor still remains challenged. If they can kill the treponema (microorganisms) in systemic lues (syphilis), I shall be convinced."

Attention is called to the malaria treatment in England where the infection is transmitted by the mosquito of the pure quartan (every third day fever) strain, instead of the tertian (every second day fever) inoculation, as practiced in America. British authorities claim that the curative action of the malaria is not on account of the fever, but is due, chiefly, to the continued presence of the parasites and their toxins. For this reason they permit the fever to continue until the patient has acquired tolerance of the parasites.

The sulphur-in-oil treatment of paresis, first reported by Dr. Chas. F. Read, managing officer of the Elgin State hospital, is not without its defenders. The outstanding claims for it are that it is harmless, controllable, readily available and easily regulated. Dr. Read is quoted as saying that "its use is especially recommended in cases not thought suitable for malaria or typhoid vaccine therapy, or-where the malarial infection must be stopped for one reason or another."

Another authority is quoted as saying, "that it is chiefly of value in cases of dementia paralytica in which malaria is indicated, and in many cases is superior to malaria, especially in the hands of an average physician."

Diathermy is referred to in the study as a recent treatment for paresis, and as a departure from the usual forms of fever therapy. Referring to the early workers in this departure the study says:

"These workers reported that the beneficial results of fever produced by diathermy are easily comparable with those obtained with malaria, and that there is every evidence that the benefits derived in the past from fever therapy by malaria and other substances have been due entirely to the accompanying elevation of temperature, and not to any associated biochemic reaction to the infecting organism."

The advantages claimed for the diathermy treatment are complete control of the temperature throughout the treatment which may be given at any time, stimulation of the normal metabolic activities, small risk, and no danger of expending effort on patients who are immune to malaria.

Its objections are that mental patients who are inclined to be nervous and irritable are difficult to treat, the expense is prohibitive in certain localities, and the danger of burns is always present.

The electrically heated blanket was first reported by Dr. Sidney D. Wilgus, one of the collaborators of the study, and was used for the first time at the State Psychopathic Institute at Elgin.

"There are no dangers conrected with this form of treatment," says the survey, "and after two years' use we feel that the electrically heated blanket is the simplest and safest form of fever producing agents."

In conclusion, the survey says, "We have examined the records of 500 patients suffering from general paralysis, who were treated by various forms of fever therapy at the Elgin State hospital and the State Psychopathic institute during the five-year period, 1927 to 1932.

"In this study of the patients treated by fever therapy we have not included those patients, and they were few, who died soon after treatment, or those who were not physically able to complete a course of fever treatments.

The following table shows the results of the five forms of fever therapy for paresis employed in the treatment of the 500 patients referred to:

Form of Therapy. Typhoid Vaccine Sulphur-in-oil Malarial Fever	52 58 66	Per cent Unimproved. 28 21 20	Per cent Worse. 20 21 14
Malarial Fever Diathermy Electric Blanket	72 78	11 15	

The collaborators did not report an extensive study of radiothermy for the reason that up to this time it has not been employed as a fever producing agency in the treatment of paresis in the mental hospitals in Illinois.

However, they describe the apparatus, the technic in raising the temperature and "conclude that radiothermy is a less hazardous agent for producing fever than malaria."

# FIRST ATTEMPT AT HUMANE TREATMENT OF INSANE

About the first instance of an attempt at humane treatment of the insane occurred in France in 1793. A French physician named Phillipe Pinel was made head of the municipal hospital in Paris. One of his first acts was to go through the hospital and strike the chains from the hands and feet of the insane patients.

The following report on the first patient released is from Bedford Pierce's introduction to the life of this humanitarian:

"The first man on whom the experiment was to be tried was an English captain, whose history no one knew, as he had been in chains forty years. He was thought to be the most furious among them; his keepers approached him with caution, as he had, in a fit of fury, killed one of them on the spot with a blow from his manacles. was chained more rigorously than any of the others. Pinel entered his cell unattended and calmly said to him, 'Captain, I will order your chains to be taken off, and give you liberty to walk in the court, if you will promise me to behave well and injure no one.' Yes, I promise you,' said the maniac, but you are laughing at me; you are all too much afraid of me.' 'I have six men,' answered Pinel, 'ready to enforce my commands if necessary. Believe me, then, on my word, I will give you your liberty if you will put on this waistcoat.' He submitted to this willingly, without a word; his chains were removed, and the keepers retired, leaving the door of his cell open. He raised himself many times from his seat, but fell again on it, for he had lost the use of his legs. In a quarter of an hour he succeeded in maintaining his balance, and with tottering steps came to the door of his dark cell. His first look was at the sky, and he cried out enthusiastically, 'How beautiful.' During the rest of the day he was constantly in motion, walking up and down the staircases, and uttering short exclamations of delight. In the evening he returned, of his own accord, into his cell, where a better bed than he had been accustomed to had been prepared for him, and he slept tranquilly. During the two succeeding years which he spent at Bicetre he had no return of his previous paroxysms, but even rendered himself useful, by exercising a kind of authority over the insane patients, whom he ruled in his own fashion."

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